

silicon film.” Zhang then goes on to further clarify that horizontal growth does not extend from the regions 108 to 110:

In such a configuration, *only vertical growth is carried out in the regions denoted by 108 to 110*. This is because horizontal growth does not take place when the region which nickel is held in contact with is small.

*When the horizontal growth collides with the regions denoted by 108 to 110 where the vertical growth takes place, the horizontal growth stops there.* Therefore, the horizontal growth regions formed by horizontal growth and denoted by 104 to 107 can be limited to predetermined regions by suitably providing the regions denoted by 108 to 110.

That is, horizontal growth regions can be obtained with high controllability by using the regions denoted by 108 to 110 as horizontal growth stopper regions.

Col. 4, lines 49-59 (emphasis added). Thus, as noted in the prior response, Zhang does not describe or suggest crystal growth parallel to the substrate and extending from the regions 108 to 110. As such, none of the regions 108 to 110 can correspond to the second metal element of claim 6, as set forth in the rejection, since the amorphous semiconductor film is not crystallized from the regions 108 to 110 in parallel to the substrate, as recited in claim 6. For the same reason, none of the regions 108 to 110 can constitute the recited first metal element.

Nor can the regions 101 or 102 correspond to the recited second metal added element. In particular, as shown in Fig. 2, each of the crystalline regions extending from the regions 101 and 102 is used to form active layers for thin film transistors. As such, if the region 101 or the region 102 were said to correspond to the second metal added element, there would be no second crystalline portion that is not used to form any crystalline semiconductor island, as recited in claim 6.

Accordingly, for at least these reasons, the rejection of claim 6 and its dependent claims should be withdrawn.

Like claim 6, each of independent claims 9, 24, 31, 40, 48, 55 and 64 recites crystallizing the amorphous semiconductor film from the first metal element added region and the second metal element added region in parallel to the substrate to form a first crystalline portion and a second crystalline portion, respectively, where the second crystalline portion is not used to form any crystalline semiconductor island. Accordingly, for at least this reason, the rejection of claims 9, 24, 31, 40, 48, 55 and 64, and their dependent claims, should be withdrawn.

Applicant : Ohtani, et al.  
Serial No. : 09/455,991  
Filed : December 6, 1999  
Page : 3 of 3

Attorney's Docket No.: 07977-213002 / US3521/3522D1

Also, with respect to dependent claims 15, 16, 20, 21, 29, 30, 37, 38, 45, 46, 53, 54, 61, 62, 69 and 70, applicant requests reconsideration and withdrawal of the rejection because Zhang does not describe or suggest S values such as are recited in the claims. The rejection points to col. 13, lines 53-54 of Zhang as describing such values. However, that passage merely notes that a thin film transistor may have an average mobility of  $100\text{cm}^2/\text{Vs}$ , and in no way describes or suggests the recited S values.

Applicant submits that all claims are in condition for allowance.

No fees are believed due. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 6/17/05

  
\_\_\_\_\_  
John F. Hayden  
Reg. No. 37,640

Customer No. 26171  
Fish & Richardson P.C.  
1425 K Street, N.W., 11th Floor  
Washington, DC 20005-3500  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331